Sugar as Fuel for Honduran Growth

A March 2008 report from the U.S. Embassy Tegucigalpa, Honduras.

Summary: *La Grecia, Honduras's largest sugar mill, has doubled its production since 1994 and recently expanded its electricity co-generation capability to burn coal during the months that sugar cane waste is not available. This additional installed capacity will be a welcome boost to Honduras's tight energy supply. Ethanol production, however, seems far away because of economic considerations and political uncertainty.*

The Honduran Sugar Economy

Sugar in Honduras is harvested from late November through late March or early April. After the cane is harvested and transported to the mill, it is finely chopped and then pressed to separate liquid (cane juice) and solid (bagasse) portions. The liquid portion is heated, clarified, refined, and placed in a centrifuge, which in turn separates the remaining liquid (molasses) from the solid sugar crystals. After being dried, these crystals become the familiar refined, white sugar found in supermarkets. Hondurans consume a substantial amount of sugar – about 78 pounds per person per year – and the Honduran government requires that it be fortified with vitamins.

The bagasse is burned to create electricity, both to power the mill and to sell to the grid. Honduras produces 6-10 percent of its electricity from sugar bagasse. Given current rising energy demand and tight supply, even small increments to capacity are valuable. *La Grecia*, the largest sugar mill in Honduras with approximately 11,000 hectares under cultivation has 34 megawatts (MW) of installed capacity, of which 11 MW are for internal use, leaving 23 MW available to be sold to the grid, but only during harvest time. Last year *La Grecia* bought and installed an old U.S. coal-fired generator, modifying it to run on both bagasse and coal. This gives it the ability to produce electricity year-round. The coal would come from Colombia or Venezuela and be delivered to the nearby port of San Lorenzo.

La Grecia is ready to begin producing electricity from coal once an agreement with the national electric company, ENEE, is signed. Other mills may also take advantage of the opportunity to produce energy from coal during the non-harvest months, but thus far *La Grecia* has shown the most interest, due to its economies of scale and proximity to the port, which lowers the cost of transporting the coal.

What About Ethanol?

Although there are multiple biodiesel projects in Honduras, the country has yet to produce a drop of ethanol. There are two main reasons for this: a wait-and-see attitude on the part of most Honduran business people and price uncertainty. The initial investment is high, sugar and ethanol prices are in flux, and investors worry that U.S.

duty-free treatment for ethanol that is dehydrated in Honduras from Brazilian stock may not continue.

The Future of Sugar

Sugar has been a CAFTA-DR success story for Honduras. Improved access to the U.S. market allowed Honduran sugar exports to the United States to more than double in 2007 to $27.5 million. But further expansion of sugar production, at least in the South of the country where *La Grecia* operates, is problematic. The sugar season, like that of melons (the other main agricultural commodity exported from Honduras's southern panhandle), is seasonal, providing employment from December through March. Although salaries at harvest time are competitive by Honduran standards, they do not provide sufficient income to last the entire year. Therefore, many workers leave the area and emigrate to the United States. The remittances they send back support many of their relatives who remain behind. Thus, sugar producers struggle to find enough people willing to work in the fields at the prevailing wages. Some firms are mechanizing their operations to cope. But the region will have to attract enough financial capital to reverse its flight of human capital before the full potential of sugar to provide employment, renewable energy, and export earnings can be realized.